User Manual

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BLENDER

Portable 12 x 8 Stereo Mixer with USB Connectivity

TC HELICON

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EN Important Safety Instructions

CAUTION
RISK OF ELECTRIC SHOCK!
DO NOT OPEN!
ATTENTION
RISQUE D'ÉLECTROCUTION !
NE PAS OUVRIR !

Terminals marked with this symbol carry electrical current of sufficient magnitude to constitute risk of electric shock. Use only high-quality professional speaker cables with ¼" TS or twist-locking plugs pre-installed. All other installation or modification should be performed only by qualified personnel.

This symbol, wherever it appears, alerts you to the presence of uninsulated dangerous voltage inside the enclosure - voltage that may be sufficient to constitute a risk of shock.

This symbol, wherever it appears, alerts you to important operating and maintenance instructions in the accompanying literature. Please read the manual.

Caution
To reduce the risk of electric shock, do not remove the top cover (or the rear section). No user serviceable parts inside. Refer servicing to qualified personnel.

Caution
To reduce the risk of fire or electric shock, do not expose this appliance to rain and moisture. The apparatus shall not be exposed to dripping or splashing liquids and no objects filled with liquids, such as vases, shall be placed on the apparatus.

Caution
These service instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other than that contained in the operation instructions. Repairs have to be performed by qualified service personnel.

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Clean only with dry cloth.

7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.

8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.

11. Use only attachments/accessories specified by the manufacturer.



12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.

14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

15. The apparatus shall be connected to a MAINS socket outlet with a protective earthing connection.

16. Where the MAINS plug or an appliance coupler is used as the disconnect device, the disconnect device shall remain readily operable.



17. Correct disposal of this product: This symbol indicates that this product must not be disposed of with household waste, according to the WEEE Directive (2012/19/EU) and your national law. This product should be taken to a collection center licensed for the recycling of waste electrical and electronic equipment (EEE). The mishandling of this type of waste could have a possible negative impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. At the same time, your cooperation in the correct disposal of this product will contribute to the efficient use of natural resources. For more information about where you can take your waste equipment for recycling, please contact your local city office, or your household waste collection service.

18. Do not install in a confined space, such as a book case or similar unit.

19. Do not place naked flame sources, such as lighted candles, on the apparatus.

20. Please keep the environmental aspects of battery disposal in mind. Batteries must be disposed-of at a battery collection point.

21. Use this apparatus in tropical and/or moderate climates.

LEGAL DISCLAIMER

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LIMITED WARRANTY

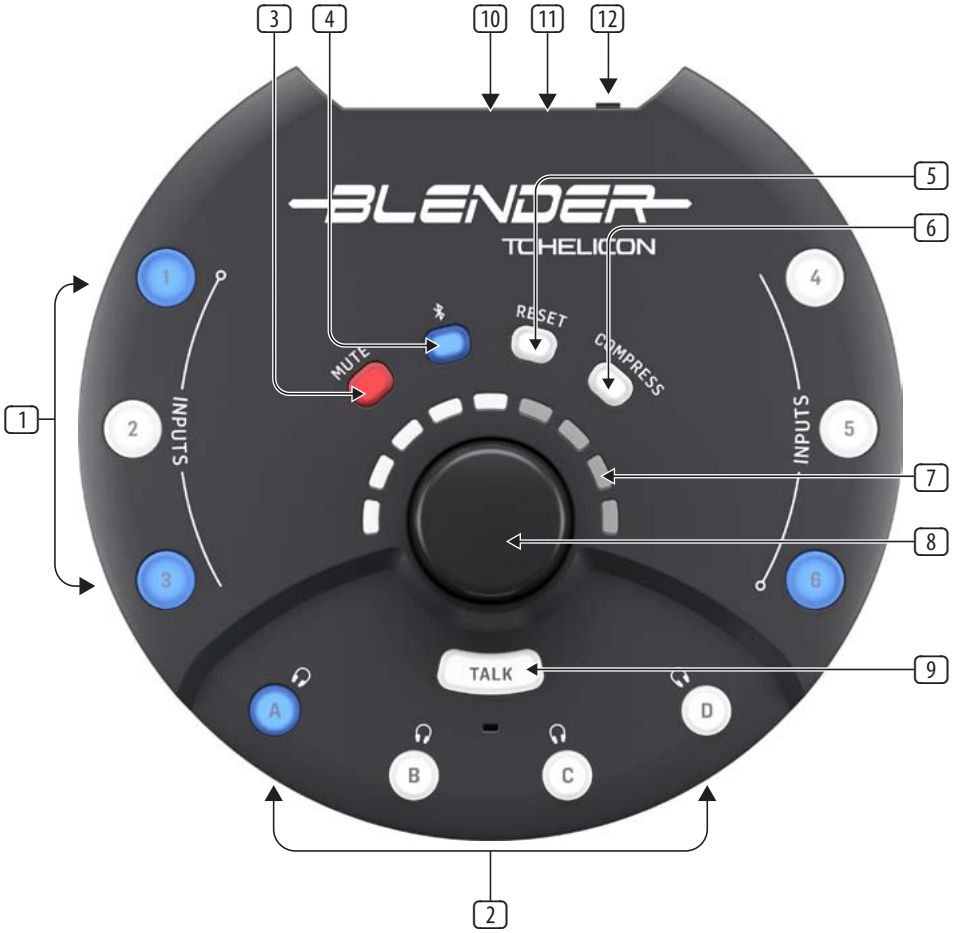
For the applicable warranty terms and conditions and additional information regarding Music Tribe's Limited Warranty, please see complete details online at musictribe.com/warranty.

Zhongshan Eurotec Electronics Limited
No. 10 Wanmei Road, South China Modern Chinese Medicine Park, Nanlang Town, 528451, Zhongshan City, Guangdong Province, China

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1. Intro

Blender is a simple, portable stereo mixer that allows several musicians to collaborate and monitor custom headphone mixes. Simple controls allow quick input level adjustments, compression, muting and ambient mic level for each output. Connect a phone or tablet to Blender via Bluetooth for even easier control, plus extra features like saved presets. A 12x2 USB audio interface also allows performances to be multitracked with the DAW of your choice.
With a compact form factor and ability to operate on batteries, Blender lets you take your songwriting, rehearsals and demo recording anywhere!

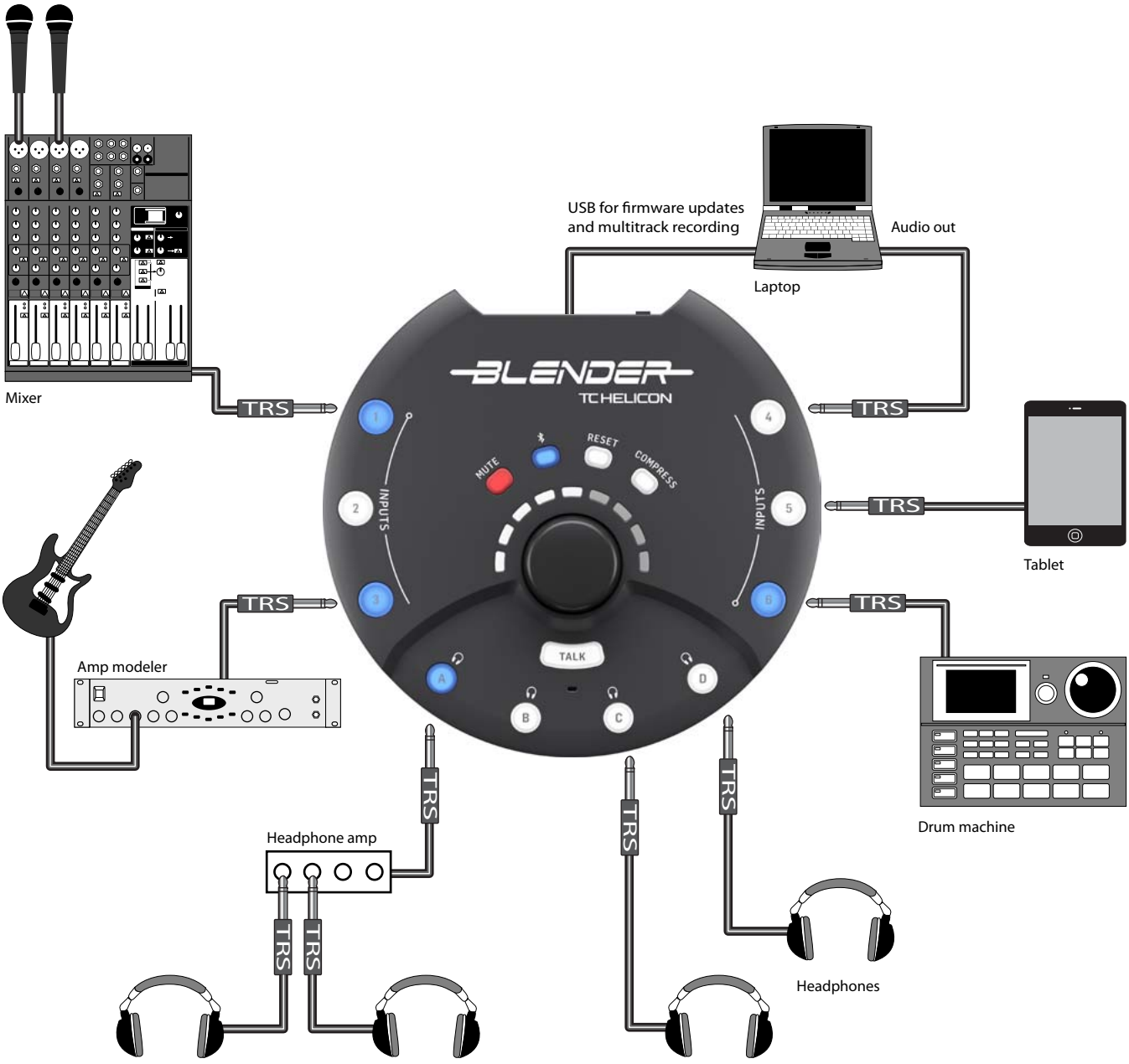


2. Controls and Connectors

1. **INPUTS** - Connect stereo sources via ⅛" TRS cable. Pressing the associated input button causes the button to flash blue, indicating that the level of that input can be adjusted for the currently-selected headphone channel using the big knob. If the button lights red, lower the output level of the source audio.
2. **OUTPUTS** - Connect a pair of headphones via ⅛" stereo cable. Pressing the associated output button causes the button to light blue, indicating that the headphone volume can be adjusted with the big knob.
3. **MUTE** - Press this button to mute all outputs.
4. **BLUETOOTH** - Press this button to make the Blender discoverable by Android and iOS devices for use with the control app.
5. **RESET** - Hold this button for 3 seconds to reset the device to factory default settings.
6. **COMPRESS** - Press this button to compress and boost the average level for inputs routed to the currently-selected output. Compression can be engaged and adjusted separately for each output.
7. **LEVEL METER** - Indicates the level of the currently-selected input, output, or Talk.
8. **BIG KNOB** - Adjusts the level of the currently-selected item.
9. **TALK** - Pressing this activates the onboard microphone, allowing some room sound to be mixed into the outputs. While the Talk button flashes, the level can be adjusted for the currently-selected output. If another input or output button is pressed, the Talk button remains lit red, but loses the focus of the big knob. Select another output channel, then disengage and re-engage Talk so that it flashes again, enabling the level for that output to be adjusted.
10. **USB** - Connect the included USB cable to a computer for multitrack recording and firmware updates.
11. **Power** - Connect the included power cable.
12. **ON/OFF -** Power the unit on and off with this switch.

3. Hookup

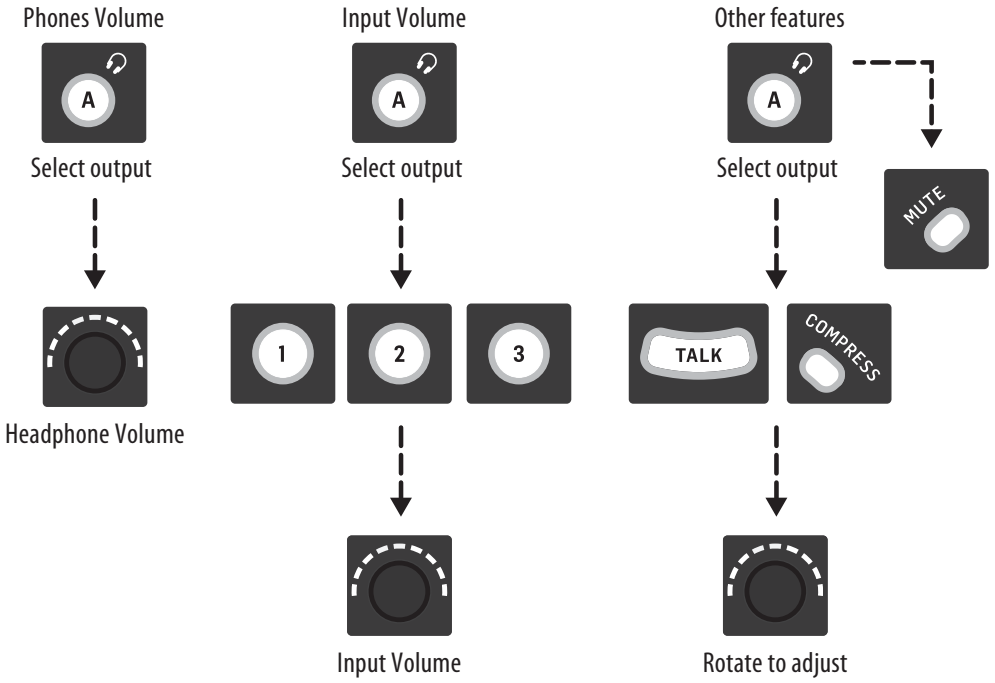
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USB for firmware updates
and multitrack recording
Audio out
Laptop
Mixer
TRS
BLENDER
TC HELICON
MUTE
RESET
COMPRESS
INPUTS
TALK
Tablet
Amp modeler
Drum machine
Headphone amp
Headphones

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4. Operation

This overview graphic demonstrates the basic signal flow and control elements available on Blender. The various buttons can function as a focus selection for the big knob and sometimes as on/off switches as well. Changes made to input channel levels, Compress, Talk, and output levels are all made with the 'big knob' control at the center of Blender.



Input/output mixing

Pressing any of the 4 output buttons A-D will cause that button to light blue, after which the headphone volume can be adjusted with the big knob. Only one output button will remain lit at a time. While an output is selected, the input channel buttons can be pressed, allowing the level of each input to be adjusted for that headphone mix.

Note that it may be most effective to keep the channel levels fairly moderate, and compensate for overall level with the output level control. This will leave "room" to raise individual signal levels as needed. It may also be necessary to adjust the output level of your audio sources so that they deliver sufficient signal, but not so much that Blender's inputs start clipping (input button lights red).

Mute

This is the simplest control on the unit. Pressing the Mute button mutes the outputs and causes the button to light red.

Compress

Adding compression to the inputs achieves 2 things: reduced dynamic fluctuation and increased volume. Reducing dynamics can help some sources remain audible during quieter parts, and prevent loud transients from jumping out. If the overall headphone level isn't sufficient, adding compression will help as well.

After selecting an output, press the Compress button to activate compression on the input signals that are routed to the output. The other output buses will not be affected. Immediately after being engaged, the Compress button will flash blue, indicating that the compression threshold can be adjusted with the big knob.

Note that adding compression can affect the balance of the various inputs in your headphone mix, so further adjustments may be necessary.

Talk

Monitoring several sources through headphones is a great way to ensure that you can hear the right amount of each signal. However, you may also want some ambient room input as well, and this is achievable with the Talk button and onboard microphone.

Unlike the Compress feature, the Talk signal is activated globally for all outputs. However, the level can be adjusted for each output independently, and therefore can be turned all the way down if desired.

After the Talk function has been activated, the button will flash red, indicating that the volume can be adjusted for the currently-active output. Even after the focus of the big knob shifts to another input or output, the button will remain lit red. To adjust the level for other outputs, select an output, then disengage and re-engage the Talk function so that the button flashes red again.

Of course, mixing in the ambient sounds of the room will likely affect the balance of the mix and require the individual channels to be adjusted accordingly.

Reset

Hold the Reset button for 3 seconds to return Blender to its default factory settings.

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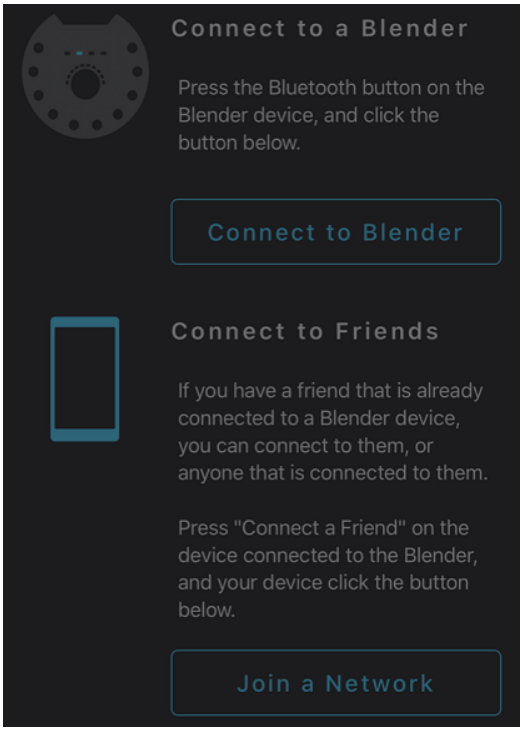
5. App Control

The dedicated Blender app for Android and iOS allows all of the mixing functions to be controlled wirelessly via Bluetooth, and provides quick visual feedback to settings for all 4 outputs. It also accesses additional features not found on the hardware unit, such as saving presets.

Visit the Google Play store or Apple App Store to download the Blender app. It's free!

Connection

Open the Blender app. The connect page will appear, and you will have the option to connect directly to the Blender unit. The iOS app also allows connection to an already existing network. You can click the 'How Does it Work?' link for some brief instructions for these connection options (Android only).

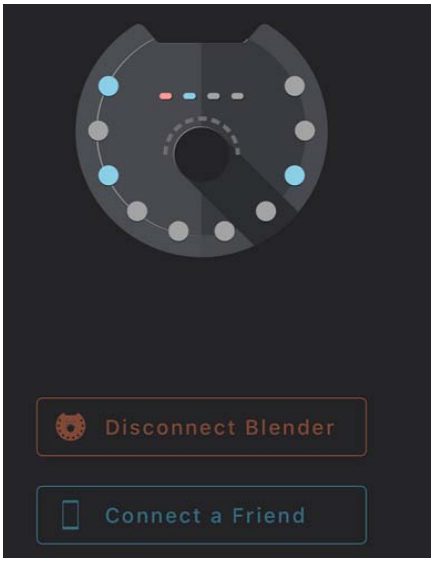


To connect to Blender, press the Bluetooth button on the hardware unit, then press 'Connect to Blender' on your smart phone or tablet. If a successful connection is made, the main control screen will open, otherwise the connection screen will reappear.

Add Friend / Join a Network (iOS only)

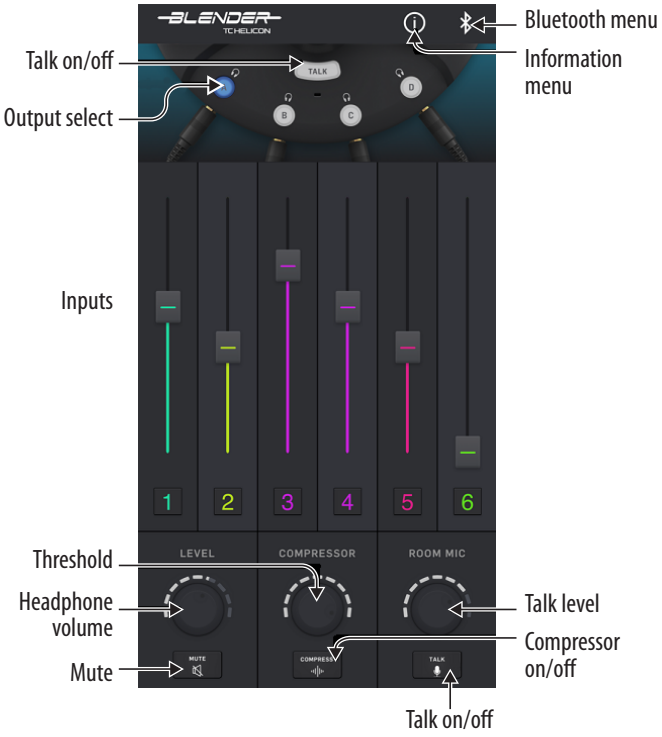
With the iOS app, you can connect several control apps to a single Blender unit, allowing everyone to be self-sufficient in adjusting their own headphone mix. There are a couple ways to achieve this, but both start with a single device connecting to Blender as described above.

- **The "Group Attack" method** – Each musician should get their iPhone/iPad ready to connect. The first person can use the 'Connect to Blender' method, and within 15 seconds of successful connection, the other musicians can tap 'Join a Network' to automatically connect.
- **The "Invitation" method** – If one device is already connected to Blender, that device can send an invitation for others to join the party. Click the Bluetooth icon in the upper right corner of the app, then select 'Connect a Friend'. The network will open for other connections, and the other musicians can tap 'Join a Network'.



Using the Blender App

The overall functionality and operation of the app is very similar to the information in chapter 4: Operation, except the app provides much better visual feedback to the various levels.



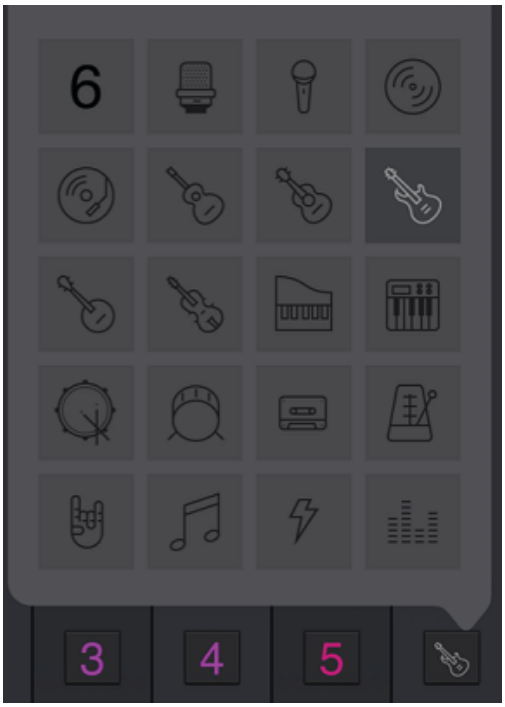
As with the hardware unit, the current output selection determines where all the adjustments will take effect. As you move back and forth between outputs A-D on the app, you will see the volume levels jump around to reflect each output's current settings. Note that selecting different outputs on the hardware unit is not reflected in the app.

The bottom section controls levels for the headphone out, compressor threshold, and Talk level, as well as the on/off buttons for these elements.

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Channel Icons

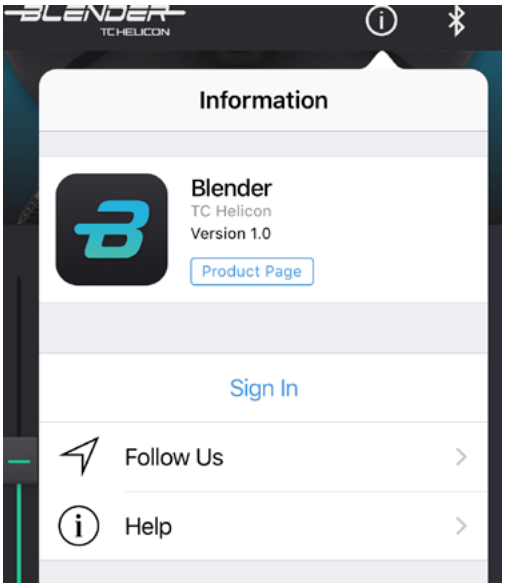
Rather than having the inputs numbered 1-6, a graphic icon can be assigned for each input to quickly identify each instrument.



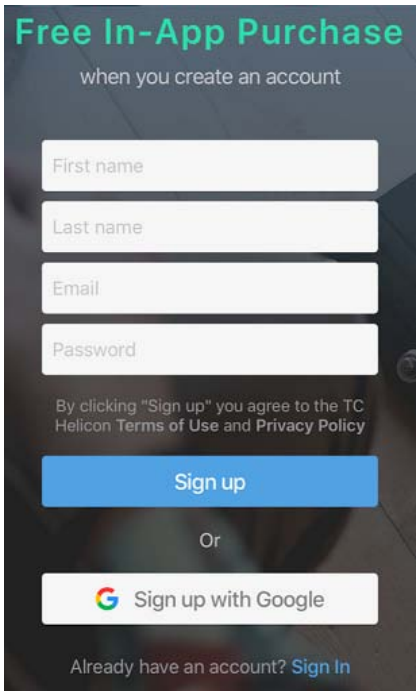
Simply touch the input number to bring up the available icons, then select the most appropriate icon for that input.

Information Menu (iOS version)

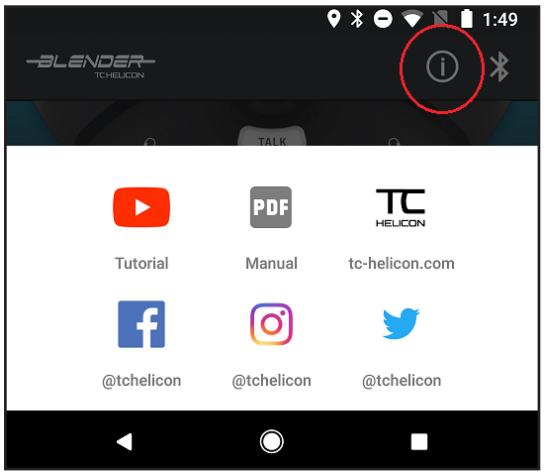
Touch the information circle icon to access the Information menu.



Here you can find links to the Blender product page on tc-helicon.com, and also links to social media. Touch the 'Sign In' link to create an account. You can either create an account directly in the app, or simply connect your Google account. A verification email will be sent to you.



Information Menu (Android version)



The information circle icon access a menu with links to the TC Helicon website, technical information, and social media accounts.

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6. Multitrack Recording

Blender features a built-in 12x2 USB audio interface to conveniently multitrack your collaborations. If you plan to use PC-based software, the first thing you'll need to do before connecting to your computer is download the driver from the following link:

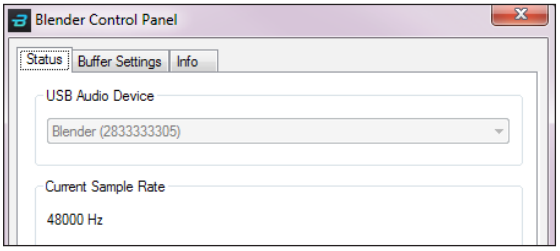
https://www.tc-helicon.com/Categories/c/Tchelicon/Downloads

Save the driver package in a familiar place on your hard drive. Double click the file and follow the steps to complete the installation. Your Blender will now appear as an audio device. Note that no driver is needed for use with Mac computers.

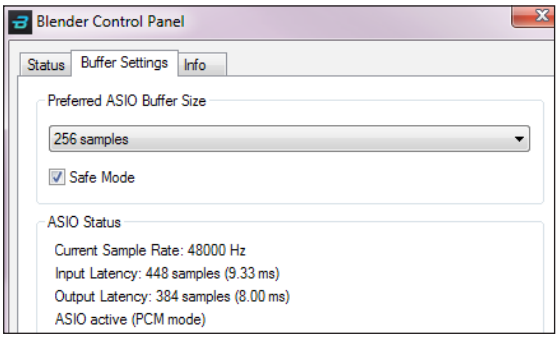
Connect the included USB cable to Blender and to your computer.
The device will automatically be recognized and you can

Blender Control Panel

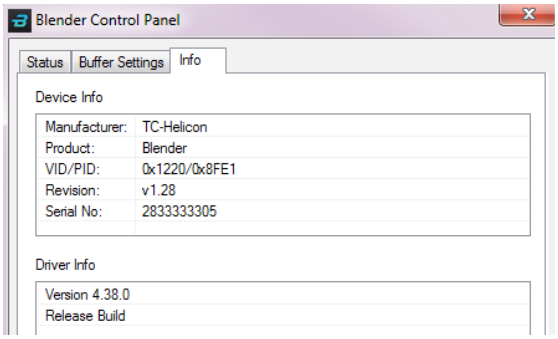
Open the Control Panel, which should appear in the task bar on a PC.
On a Mac, it will appear in the window that you used for installation, but you can drag it to the dock for easier access. This can also be accessed in some DAW programs in the hardware setup section.



If multiple Blender units are connected, you can select the specific unit as the active audio device. The default sample rate is 48 kHz.



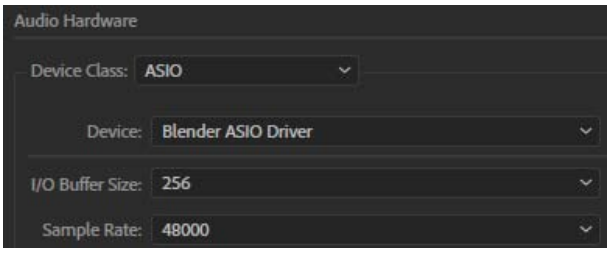
On the Buffer Settings tab, you can select the buffer size. Larger buffers ensure glitch-free operation, but also introduce a small amount of latency.
Engaging Safe Mode also adds some latency, but ensures smooth operation.



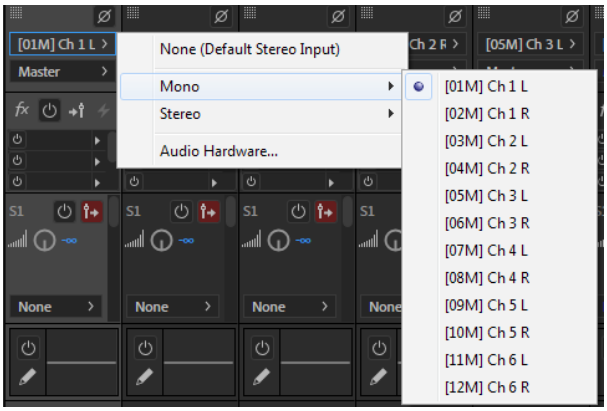
The Info tab provides some data about the Blender unit and current driver.

DAW Setup

Open your recording software and navigate to the preferences menu where the audio hardware source is selected. Blender may already be selected as the input and output device, but if not you can select it from a pull-down menu.

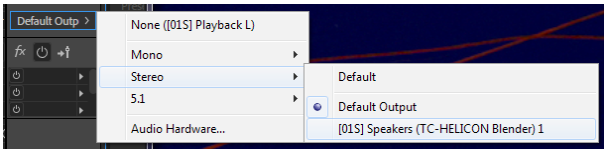


Create a new audio project in your DAW with at least 12 input channels. Some programs allow the input channels to automatically map to the interface (Blender) channels in ascending order, so if this is available, it will save you some effort. If not, you will need to assign the first track in your DAW to receive Input 1 L, or to receive Inputs 1 L and 1 R if you want to maintain the stereo coupling.



Repeat this until the 6 stereo inputs on the Blender are mapped to either stereo or separate mono channels.

Make sure that the master output bus is routed to Blender's stereo return channels so that the recorded audio can be monitored through your headphones.



When you are ready to record, you will likely need to arm each track for recording, which usually looks like an 'R' button or a red circle on each track.



You are now ready to create a multitrack recording of your performance!

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7. Specifications

Inputs	
Type	6 x ⅛" TRS, stereo unbalanced
Impedance	10 kΩ
Max. input level	8 dBu
Outputs	
Type	4 x ⅛" TRS, stereo unbalanced
Impedance	16 Ω
Max. output level	27 mW
USB	
Connector	Type-B mini
Audio	12 in / 2 out
Converter	24-bit
Sample rate	48 kHz
Bluetooth	
Frequency range	2402–2480 MHz
Channel number	79 channels - 2 MHz spacing
Version	4.1 BLE
Compatibility	4.0 or newer
Output power	+8 dbm
Power	
Power adapter	5 V DC, 1 A
Battery power	4 x AA batteries (not included)
Physical	
Dimensions (H x W x D)	43 x 132 x 124 mm (1.7 x 5.2 x 4.9")
Weight	0.37 kg (0.82 lbs)

FEDERAL COMMUNICATIONS COMMISSION COMPLIANCE INFORMATION

TC HELICON

BLENDER

Responsible Party Name:	**Music Tribe Commercial NV Inc.**
Address:	**5270 Procyon Street** **Las Vegas, NV 89118**
Phone Number:	**+1 702 800 8290**

BLENDER

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Caution!

The Music Group is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user authority to operate the equipment.

FCC RF Radiation Exposure Statement:

(1) This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
(2) This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Important information:

Changes or modifications to the equipment not expressly approved by Music Tribe can void the user's authority to use the equipment.

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